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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,805	11/20/2003	Lorenzo Parrini	16615	8662

50659 7590 11/08/2005

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EXAMINER	
KRUER, STEFAN	
ART UNIT	**PAPER NUMBER**
3654	

DATE MAILED: 11/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/717,805	PARRINI, LORENZO	
	Examiner	Art Unit	
	Stefan Kruer	3654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11/20/2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2/17/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11 – 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11 recites the limitation "said plurality of fibers" in step "b", whereas under step "a" the limitation "a plurality of load-bearing strands" is recited. There is insufficient antecedent basis for this limitation in the claim.

Claim 14 further recites the limitation "the fibers" in line 2.

For purpose of processing this application, "fibers" is understood to mean "strands".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1 - 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Angelis (5,566,786) in view of Oleson, et al (4,956,039).

In Claims 1 and 7, De Angelis discloses an elongated load-bearing support device (1) with load bearing strands (4), each having a plurality of fibers (5) of a base material in a first phase (aramid fibers (Col. 2, Line 38)) and the strands being surrounded by a sheath (7). The reinforcing material of De Angelis is of a second phase, yet it is externally applied to the base material as "... an impregnating medium, for example polyurethane solution, for the protection of the fibers 5" (Col.3, Line 57) whereby the bending fatigue strength of the strands is increased, though at the expense of "... carrying capability and the modulus of elasticity..." of the fiber (Col. 3, Line 61). De Angelis adds, "Expediently, the individual strands can also be protected by a braided sleeve of polyester fibers"(Col. 3, Line 67).

Oleson, however, discloses the application of a thermoplastic sleeve that "...is preferably filled with reinforcement elements having a high modulus of elasticity..." (Col. 2, Line 60), thereby teaching the distribution of reinforcing material of one phase within a base material of another (second) phase. Furthermore, since the objective of the Oleson reference was "...to provide a method or an apparatus for the economical manufacture of a cable-like synthetic composite body which satisfies the requirements of being able to bear relatively high tensile and compressive forces in every respect..." and that De Angelis discloses further an "expedient" means of protecting the strands through a polyester sleeve, in lieu of impregnating the strands with a polyurethane solution, it would have been obvious to one of ordinary skill in the art to modify the base material of De Angelis with the teaching of Oleson, in order to gain the commercial and structural (performance) features of Oleson.

In Claim 2, De Angelis discloses a plurality of fibers (5) formed into a cable (4 and, in total, 1).

With respect to Claims 3 and 8, though De Angelis discloses a base material (5) of aramid fiber and a reinforcing material comprising a polyurethane solution with which "each individual strand 4 is treated..." (Col. 3, Line 56), thereby increasing the bending fatigue strength and, therefore, the (bending) modulus of elasticity of each strand in a radial direction (whereby each strand comprises fibers) he is silent regarding the treatment of the individual fibers. Olesen, however, discloses a thermoplastic material that can be "...polypropylene filled with 20% E-glass staple fibers... (Col. 7, Line 7) whereby the glass fibers significantly increase the modulus of elasticity of each of the fibers in the longitudinal direction. Therefore, it would have been obvious to one of ordinary skill in the art to modify the invention of De Angelis with the teaching of Olesen, in order to provide a base material of superior tensile strength.

Regarding Claims 4 and 9, Olesen discloses a reinforcing material as "... staple fibers (23) of a high modulus of elasticity..." which is used to fill the base material (13) of thermoplastic material.

In Claims 5 and 10, as noted above, Olesen discloses a reinforcing material as "... staple fibers...", wherein staple fibers are understood to be short fibers.

Regarding Claim 6, De Angelis discloses that in "...another form or embodiment ...each individual strand 4 is provided with a separate, annular closed casing..." (Col. 4, Line 63).

Regarding Claims 11 – 15, the devices of Claims 1 – 10 would necessarily have to be formed in order to function. It would have been obvious to perform all the method steps of claims 11-15 when producing the device of De Angelis as modified by Olesen above, in a usual and expected fashion, in as much as the method claims recite no limiting steps beyond forming each of the components.

In Claim 11, De Angelis, again, discloses an elongated load-bearing support device (1) with load bearing strands (4) from a base material in a first phase (aramid fibers) and a reinforcing material in a second phase ("... an impregnating medium, ...polyurethane solution), with the strands being surrounded by a sheath (7).

In Claim 12, De Angelis discloses a base material selected from aramid (5) and Oleson discloses a base material selected from a thermoplastic.

In Claim 13, De Angelis discloses a reinforcing material (polyurethane solution) that provides an increased bending fatigue strength (bending modulus of elasticity) in comparison to that of the base material (aramid fiber). Oleson teaches a reinforcing material as "... staple fibers (23) of a high modulus of elasticity..." which is used to fill the base material (13) of thermoplastic material (i.e., polypropylene).

In Claim 14, De Angelis discloses the treatment of the individual strands (4) with a reinforcing material (preferably polyurethane solution) for purpose of protection and increasing the bending fatigue strength (bending modulus of elasticity) of each strand in a radial direction.

In Claim 15, whereas De Angelis discloses an impregnation solution of polyurethane, Olesen teaches the incorporation of "reinforcement elements... in particular staple fibers..." (Col. 2, Line 61) and that the staple fibers be of "... glass, aramid or carbon..." (Col. 4, Line 5), and where staple fibers are understood to be short fibers.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Loos (4,034,547), Damien (5,651,245), Simpson (4,202,164), Priesnitz, et al (5,830,304) and Klees (4,887,422) are cited for a cable having a wire rope jacket with core of year filaments with a specific tensile strength greater than that of the members of the jacket, a cable having a core of synthetic material bounded by outer strands of metallic fibers, an aramid fiber rope impregnated and surrounded by a plastic material, an apparatus and process for a tension-resistant (cable) core element containing glass and thermoplastic fibers, and a rope consisting of helically laid outer strands around a high strength synthetic fiber core, respectively.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefan Kruer whose telephone number is 571.272.5913. The examiner can normally be reached on M-F, 08:00 - 17:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathy Matecki can be reached on 571.272.6951. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SHK/03, Nov. 2005

Kathy Matecki

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